

Abstract

An undersea optical repeater is provided that includes a pressure vessel for use in an undersea environment. The pressure vessel has at least two cable-receiving elements for respectively receiving ends of optical cables that each includes an electrical conductor therein. At least one optical amplifier is located in the pressure vessel. The optical amplifier includes at least one electrical component adapted to receive electrical power from the electrical conductors in the optical cables. A dielectric envelope surrounds the pressure vessel to provide a hermetic seal therewith. The envelope includes a dielectric overmold surrounding at least a portion of the pressure vessel.